TwinGlaze

The ultimate window solutions start with TwinGlaze

The increasing emphasis on energy savings demands higher performing glass be used in all residential and commercial buildings. G.James TwinGlaze range of insulated glass units provide options to meet any aesthetic and thermal performance requirements.

An insulated glass unit consists of two or more panes of glass separated by an aluminium spacer and hermetically sealed. The entrapped air remains at atmospheric pressure while the desiccant located within the spacer prevents condensation from forming inside the unit.

TwinGlaze units improve occupant comfort by reducing the flow of heat from inside to the outside and vice versa, depending on the season. This is achieved by the airspace between the glass panes diffusing the transfer of heat and creating insulation properties almost twice that of a single pane of glass.

PROCESS

Insulated glass units are produced on a vertical production line where cut-to-size glass is thoroughly washed and dried prior to being inspected to ensure the glass is clean and free from defects.

A hollow length of aluminium spacer bar is made to size by bending it at the corners into a rectangular shape and joined along one edge. The spacer is then filled with a desiccant (molecular sieve) to prevent condensation occurring within the sealed unit.

Polyisobutylene (PIB) is then applied to both sides of the aluminium spacer providing the primary seal and is an excellent moisture and vapour barrier.

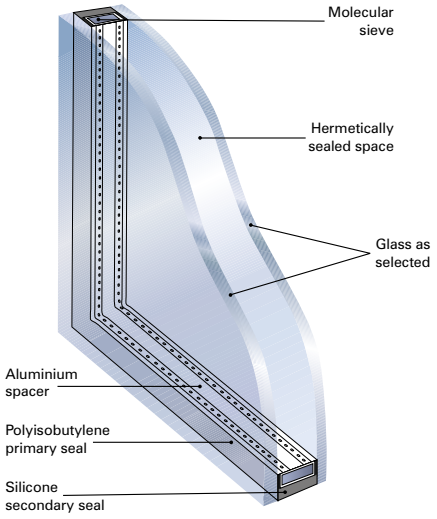
The spacer is then positioned on one of the lites of glass before the second lite is inspected and paired up automatically on the production line. The paired unit is then pressed to ensure a good seal is achieved between glass and spacer before a secondary seal of silicone is applied to the void around the perimeter of the unit. This secondary seal provides a structural bond to hold the unit together as well as assisting in reducing the ingress of moisture and vapour.

PERFORMANCE OPTIONS

Low-E coatings work by reflecting long wave infrared heat back to the source. Heat always flows towards cold, a Low-E coating reduces this transfer of heat (loss or gain) in winter or summer. The transfer of heat is measured in U Value (W/m2C) with the lower the number, the better the performance. Some Low-E coatings also reflect a significant amount of short wave infrared energy which results in a lower solar heat gain coefficient (SHGC).

For improved thermal or acoustic performance normal air within the unit can be replaced with a gas such as Argon or SF6. This gas is inserted into the unit automatically online or manually offline.

Incorporating laminated glass into a TwinGlaze unit will reduce ultraviolet (UV) transmittance by greater than 99%.



G.James are members of the Insulated Glass Manufacturers Affiliation (IGMA) and are committed to producing high quality insulated glass units for the Australian market.

RANGE

TwinGlaze

TwinGlaze consists of clear and/or tinted components within an insulated glass unit.

Features

- Superior life dual seal unit - Polyisobutylene (PIB) primary seal and silicone secondary seal
- Improved acoustic performance
- Units can incorporate GJ Float clear and/or tinted components
- Provides good occupant comfort
- Suitable for both commercial and residential applications

TwinGlaze Plus

TwinGlaze Plus insulated glass units incorporate a GJ Solect (hard coat) Low-E or a reflective Low-E coating into the unit. The addition of this Low-E coating significantly improves the thermal performance of the unit when compared to that offered in the TwinGlaze range.

Features

- Superior life dual seal unit - Polyisobutylene (PIB) primary seal and silicone secondary seal
- Improved acoustic performance
- Units incorporate GJ Solect range of on-line Low-E glass with GJ Float clear or tinted components
- Improved thermal performance
  - Lower SHGC
  - Lower U Value
- Provides better occupant comfort
- Improved energy efficiency
- Suitable for both commercial and residential applications

TwinGlaze Ultra

TwinGlaze Ultra insulated glass units incorporate a post-temperable Low-E coating into the unit. These coatings are the highest performing Low-E coatings available and provide significant improvement to the thermal performance of the unit compared to that offered in the TwinGlaze or TwinGlaze Plus range.

Features

- Superior life dual seal unit - Polyisobutylene (PIB) primary seal and silicone secondary seal
- Improved acoustic performance
- Units incorporate TLE62 or the ETherm range of off-line high performance Low-E glass with GJ Float clear or tinted components
- Superior thermal performance
  - Lower SHGC
  - Lower U Value
- Provides superior occupant comfort
- Maximum energy efficiency
- Suitable for both commercial and residential applications

TwinGlaze

Insulated Glass Units for Energy Savings and Comfort

G.James TwinGlaze range of insulated glass units provide options to meet any aesthetic and thermal performance requirements.

ADVANTAGES

- Superior performance
- Shorter supply time
- Available in a range of tones*
  - Clear
  - Grey
  - Green
  - Bronze
  - Blue
  - Dark Green

* Other tones may be available (contact G.James Glass Products)

APPLICATIONS

- Windows and Doors (Residential & commercial)
- Façades
- Shopfronts

HOW TO SPECIFY

- Select
  - TwinGlaze
  - TwinGlaze Plus
  - TwinGlaze Ultra
- Product name (Refer performance comparison chart)

TWINGLAZE

PRODUCT	PERFORMANCE CHARACTERISTICS							
	Visible Properties (%)			Solar Properties (%)		Solar Heat Gain Coeff.	U- Value (W/m²K)	Shading Coeff.
	Trans.	Ext. Refl.	Int. Refl.	Direct Trans.	Ext. Refl.			
Clear IGU	80	15	15	69	13	0.75	2.7	0.86
Green IGU	73	13	14	49	9	0.58	2.7	0.66
Grey IGU	50	9	13	46	8	0.55	2.7	0.64
SuperGreen IGU	66	11	14	36	7	0.47	2.7	0.54

TWINGLAZE PLUS

PRODUCT	PERFORMANCE CHARACTERISTICS							
	Visible Properties (%)			Solar Properties (%)		Solar Heat Gain Coeff.	U- Value (W/m²K)	Shading Coeff.
	Trans.	Ext. Refl.	Int. Refl.	Direct Trans.	Ext. Refl.			
Clear Low-E IGU	73	16	17	52	14	0.62	1.9	0.71
Green Low-E IGU	63	14	16	33	9	0.45	1.9	0.51
Grey Low-E IGU	34	7	14	27	8	0.40	1.9	0.46
SuperGreen Low-E IGU	55	12	15	24	7	0.35	1.9	0.40

TWINGLAZE ULTRA

PRODUCT	PERFORMANCE CHARACTERISTICS							
	Visible Properties (%)			Solar Properties (%)		Solar Heat Gain Coeff.	U- Value (W/m²K)	Shading Coeff.
	Trans.	Ext. Refl.	Int. Refl.	Direct Trans.	Ext. Refl.			
ETherm 60 Clear IGU	70	11	12	34	28	0.39	1.7	0.45
ETherm 60 Green IGU	61	10	10	25	11	0.37	1.7	0.42
ETherm 60Grey IGU	33	6	9	17	13	0.28	1.7	0.32
ETherm 60 SuperGreen IGU	53	9	10	20	7	0.31	1.7	0.35
TLE62 Clear IGU	61	11	12	23	39	0.27	1.6	0.31
TLE62 Green IGU	53	10	11	18	13	0.32	1.6	0.37
TLE62 Grey IGU	29	6	9	11	15	0.23	1.6	0.27
TLE62 SuperGreen IGU	46	9	10	15	8	0.28	1.6	0.32

These figures are based on NFRC methodology using LBNL Window 6.3 software.
This performance data is centre of glass only and therefore cannot be used for BCA Section J calculations.
To the best of our knowledge, the data presented in this table is accurate and true.
However, the G.James Group of Companies disclaim any liability for loss or damage arising from the use of such data.

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